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<110> Craig Rosen,
      Steve Ruben
<120> Human Cancer Associated Gene Sequences and Polypeptides
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<150> 60/124,270
<151> 1999-03-12
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<213> Homo sapiens

<400> 11

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<213> Homo sapiens

<221> misc feature <222> (806)

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<222> (2150)
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<212> DNA
<213> Homo sapiens
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<222> (1012)
<223> n equals a,t,g, or c
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<221> misc feature
<222> (1019)
<223> n equals a,t,g, or c
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<212> DNA
<213> Homo sapiens
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<211> 559

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<222> (613)
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<222> (616)
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<210> 18
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<213> Homo sapiens
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<221> misc feature
<222> (531)
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18

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19

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23

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<221> misc feature
<222> (11)
<223> n equals a,t,g, or c
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acacqtacqa cqaqtacaaa aaggqcttcc tqqaccaqqc atctqqqaqt qcaqtqctqc 180
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tgctcaggcc cggagaccgg tgttcctcca gatgccctca gaacaggctg caggactgta 240

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tccaaatgaa aaacataatt gcttcaaaac acttacacag ttggaaagtt atatgtaagt 420
gaaaatttgg accattgtgt acaaataaaa actaagatgc atgtttaata ctccacacag 480
cagcctgtaa ttgcgaatga tgggatagag ttatgtatca agtactgaca cttggttgta 540
cccactggaa tcatattagc tgttttatgt tatatgcttc cacagtaacc tgcttattca 600
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gtttacttta aaatatttat aaatatgcct taaagaaata caaatgataa caattacata 720
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<213> Homo sapiens
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<210> 30
<211> 577
<212> DNA
<213> Homo sapiens
<220>
<221> misc feature
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<222> (501)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (534)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (568)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (575)
<223> n equals a,t,g, or c
<400> 30
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gagttcaaga ccagcgtggc caacgtggtg aaccctgtct ctactaaaaa tacaaaaatt 180
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<212> DNA
<213> Homo sapiens
<400> 31
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<211> 549
<212> DNA
<213> Homo sapiens
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<221> misc feature
<222> (337)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (378)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (497)
<223> n equals a,t,g, or c
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<221> misc feature
<222> (537)
<223> n equals a,t,g, or c
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<221> misc feature
<222> (546)
<223> n equals a,t,g, or c
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<400> 32

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<210> 33
<211> 841
<212> DNA
<213> Homo sapiens
<400> 33
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gattcagatc caaaataatt tcatacccca ttttttcaca gaattcttat atagtaaatg 660
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<210> 34
<211> 863
<212> DNA
<213> Homo sapiens
<220>
<221> misc feature
<222> (19)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (29)
<223> n equals a,t,g, or c
<220>
<221> misc feature
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<222> (44)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (58)
<223> n equals a,t,q, or c
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ageggageea acatgeeagt ggeeeggage tgggtttgte gcaaaactta tgtgaceeeg 180
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<210> 35
<211> 1230
<212> DNA
<213> Homo sapiens
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<220>

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<211> 640
<212> DNA
<213> Homo sapiens
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640
<210> 37
<211> 597
<212> DNA
<213> Homo sapiens
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<221> misc feature
<222> (10)
<223> n equals a,t,g, or c
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<222> (567)
<223> n equals a,t,g, or c
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<222> (590)
<223> n equals a,t,g, or c
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<211> 1029
<212> DNA
<213> Homo sapiens
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<211> 1107
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<213> Homo sapiens
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<223> n equals a,t,g, or c
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<222> (1106)
<223> n equals a,t,g, or c
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<213> Homo sapiens
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<223> n equals a,t,g, or c
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<221> misc feature
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35

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41

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PCT/US00/05882

WO 00/55350

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48

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<223> n equals a,t,g, or c
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<223> n equals a,t,g, or c
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<221> misc feature
<222> (1358)
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<210> 67
<211> 659
<212> DNA
<213> Homo sapiens
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<221> misc feature
<222> (585)
<223> n equals a,t,g, or c
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<210> 68
<211> 2981
<212> DNA
<213> Homo sapiens
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<223> n equals a,t,g, or c
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<222> (2948)
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<211> 603

<212> DNA

<213> Homo sapiens

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<221> misc feature
<222> (595)
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<211> 1101
<212> DNA
<213> Homo sapiens
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<222> (1080)
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<223> n equals a,t,g, or c
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<221> misc feature
<222> (1090)
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<212> DNA
<213> Homo sapiens
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<223> n equals a,t,g, or c
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<222> (2853)
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<222> (2882)
<223> n equals a,t,g, or c
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PCT/US00/05882

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<223> n equals a,t,g, or c

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74

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gttcaragct tctytraagc wcawacagaa atggtgagga cgcttgagcg gaagttagaa 240
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gcaaaaatga atcaaggagg aaagcgacta ccacgacctg gagtcggtgg ttcagcaggt 300

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77

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WO 00/55350

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<211> 2511
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84

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<223> n equals a,t,g, or c
<400> 108
ggcacgagcg tgactggcgc cgaaatggga gaaagcagcg agtgagaggg gaaggggcgc 60
caggegagea cccgggagec agegggacet gggcagggge gcccggagea ggccgcatgg 120
egggeeeege geggggatee ggetggaaga gagegtaeae ggetegeaeg agteegggge 180
cgatgtacca ggtgagcggc cagcccctc tggctgcgac gcgcccttat ggagccccca 240
gcgcamcccg ggcccagccc agaccytaty cetteettee tgggctggar gtaktaacag 300
gatccactca ccctgcggag gcagcaccag aggagggctc cctggaggag gcggcaaccc 360
ccatgcccca aggcaatggc cctggcatcc cccagggcct ggacagcact gacctcgacg 420
tecceacaga agetgtgaca tgecageete aggggaacce ttgggetgea ecceaettet 480
gccgaatgac tctggccacc cctcagagct gggcggcacc agacgggcgg ggaatggtgc 540
cctgggtggc cccaaggccc accggaagtt gcagacacac ccatctctcg ccagccaggg 600
cagcaagaag agtaagagca gcagcaaatc caccacctcc cagatccccc tccaggcaca 660
ggaagactgc tgtgtccact gcatcctgtc ctgcctgttc tgcgagttcc tgacgctgtg 720
caacategte etggaetgeg ceaectgtgg etectgeage teggaggaet egtgeetetg 780
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eggeateetg gatgeetget gegagteege ggaetgeetg gaaatetgea tggantgetg 900
tgggctctgc ttctcctcct gagcctctgt cgggggctaa gccagcctgg cgcccctgca 960
gattccagca gggtccctct gagtggggcc aggcccagga ctgtcacaca aggcttgana 1020
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                                                                   1058
<210> 109
<211> 1076
<212> DNA
<213> Homo sapiens
<220>
<221> misc feature
<222> (780)
<223> n equals a,t,g, or c
<400> 109
caggaggaag caggaagaaa caggaggagg aacctgagac agagccgctg aagtccttgc 60
tggaagcaga tgggattaaa tgagcgacga gactgggaga gtgccagaga gagacaccaa 120
gaggatgcag gtctgtctgc tatcagctat gccgctgccc gttgcgctgc agacccgctt 180
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```
ggccaagaga ggcatcctca aacatctgga gcctgaacca gaggaagaga tcattgccga 240
ggactatgac gatgatcctg tggactacga ggccaccagg ttggagggcc taccaccaag 300
ctggtacaag gtgttcgacc cttcctgcgg gctcccttac tactggaatg cagacacaga 360
ccttgtatcc tggctctccc cacatgaccc caactccgtg gttaccaaat cggccaagaa 420
gctcagaagc agtaatgcag atgctgaaga aaagttggac cggagccatg acaagtcgga 480
caggggccat gacaagtcgg accgcagcca tgagaaacta gacaggggcc acgacaagtc 540
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agagagagag cgagacaggg aacgggatcg ggaccgcggg tatgacaagg cagaccggga 660
agagggcaaa gaacggcgcc accatcgccg ggaggagctg gctccctatc ccaagagcaa 720
gaaggcagta agccgaaagg atgaagagtt agaccccatg gaccctagct catactcagn 780
acgcccccgg ggcacgtggt caacaggact ccccaagcgg aatgaggcca agactggcgc 840
tgacaccaca gcagctgggc ccctcttcca gcagcggccg tatccatccc caggggctgt 900
getcegggee aatgeagagg cetceegaac caageageag gattgaaget teggeeteee 960
<210> 110
<211> 1199
<212> DNA
<213> Homo sapiens
<400> 110
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gatgggccgg gcagggacca tggcggtggc agcagaggtg gcaggggcgg ggcggctggc 120
ggtagaggag gctgtggtcc tcagggggct gtaggtggag gtatggctcg ggccagcagc 180
gggaacggca gcgaggaggc ctggggggca cttcgggcgc cgcaacagca gcttcgagag 240
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cagcagcggc agcgtgaaat caacttgttg gcctatcatg gggcatgcca tggggctggt 480
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egececttga etgetteeag tgaacaaace tgetgtteet eetcateeag etgecetgee 660
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geactacece cagagtetgt acegeagate ttteceatgg ggetgtette cagtgaaggg 960
gacateceat aagtagtttt gagagggtgg atgggttaet tgeecaceag aaacageeet 1020
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<210> 111
<211> 3630
<212> DNA
<213> Homo sapiens
<220>
<221> misc feature
<222> (3606)
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```
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (3608)
<223> n equals a,t,g, or c
<400> 111
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eggeegetee tegetgeget tegeeteege eteeteggae teggaetegg gtttatateg 180
cgcctcactt catcccagtc ccgggcgagc agcgttgggt ttatgtcttt atttgacgaa 240
aacgacagaa gataccaaaa agttgcaatc aaagatctct tcatcttatt gataaagcca 300
ctaataagcc aaaatgtctg tcaatgtcaa ccgcagcgtg tcagaccagt tctatcgcta 360
caagatgccc cgtctgattg ccaaggttga gggcaaaggc aatggaatca agacagttat 420
agtcaacatg gttgacgttg caaaggcgct taatcggcct ccaacgtatc ccaccaaata 480
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caatggatct catgaggcga ataagctgca agacatgttg gatggattca ttaaaaaatt 600
tgttctctgt cctgaatgtg agaatcctga aacagatttg catgtcaatc caaagaagca 660
aacaataggt aattottgta aagootgtgg ctatcgaggo atgottgaca cacatcataa 720
actetgeaca tteattetea aaaaceeace tgagaatagt gacagtggta caggaaagaa 780
agaaaaagaa aagaaaaaca gaaagggcaa agacaaggaa aatggctccg tatccagcag 840
tgagacacca ccaccaccac caccaccaaa tgaaattaat cctcctccac atacaatgga 900
agaagaggag gatgatgact ggggagaaga tacaactgag gaagctcaaa ggcgtcgaat 960
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tgattcatct gacaaagaaa tcgttgctga agcagaaaga ctggatgtaa aagccatggg 1140
ccctcttgtt ctaactgaag ttctttttaa tgagaagatt agagaacaga ttaagaaata 1200
caggogocat ttcctacgat tttgtcacaa caacaaaaaa gcccaacggt accttcttca 1260
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accatttata aaatggttga aggaggcaga ggaagaatct tctggtggcg aagaagaaga 1500
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tactgtgagt ggtctgttat taagcccaat gagacatcta gggagtccat acacatcagt 1800
gagcagatgt agtttgctta tttatagcat gtttcttttt gaaaaactag tggtggacac 1860
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caaaatgtta gacatactgt attttttcgt tcagtgtggc tttaattttc ccctcttgca 2580
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<210> 112
<211> 1526
<212> DNA
<213> Homo sapiens
<220>
<221> misc feature
<222> (1496)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (1511)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (1512)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (1515)
<223> n equals a,t,g, or c
<400> 112
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tettgagget atcagategg tatggeattg gegteeggge eegeaaggeg ggegetaget 120
ggctccgggc agctcggcct tgggggcttc ggggccccga gacgcggggc gtatgagtgg 180
ggcgtgcgct ccacgcggaa gtcggagcct cctcccctgg atagggtgta cgagatccct 240
ggactggagc ccatcacctt tgcggggaag atgcacttcg tgccctggct ggcgcggccg 300
atctttccgc cctgggaccg cggctacaag gacccaaggt tctaccgctc gccccctctt 360
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gagaaagtgc ttagcettgt tgatgateca aggaaccaca tagagaacca agacgagtgc 540
gttctgaatg tgatctctca cgcccgtctc tggcagacca ctgaggaaat ccccaagaga 600
gagacetact geocogeteat egeggaeaac etaatacage tetegtaaate teagattete 660
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gatectetge ecaccatege etccagagag gagattgaag etactaagaa teatgtteta 840
gagacettet accecatate acceateate gatetteatg aatgeaatat ttatgatgtg 900
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aaggtettgg agcageecqt ggtggtgeag agegtgggea eggatggaeg tgtetteeat 1140
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gcctgggtgg actcagacca gctcctctat cagcattttt ggtgtctccc agtgatcaaa 1260
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coctettgcc tetettecac ggaagaggcc tgggccccgt ggagcctcag tgcccgtttg 1440
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                                                                 1526
<210> 113
<211> 585
<212> DNA
<213> Homo sapiens
<220>
<221> misc feature
<222> (422)
<223> n equals a,t,g, or c
<400> 113
tegacecaeg egteegeeca egegteegee caegegteeg ggageeeggt gacaggatgt 60
tggtgttggt attaggagat ctgcacatcc cacaccggtg caacagtttg ccagctaaat 120
tcaaaaaact cctggtgcca ggaaaaattc agcacattct ctgcacagga aacctttgca 180
ccaaagagag ttatgactat ctcaagactc tggctggtga tgttcatatt gtgagaggag 240
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tggaaacaaa cattattyca tcattgtgtt gatggatatc caggcttcta cagtggkcac 540
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<210> 114
<211> 501
<212> DNA
<213> Homo sapiens
<400> 114
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tamagecegt attgtggact ccaagtaatg etetttetge tacaccatae tttgtggtgt 120
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<210> 115
<211> 1965
<212> DNA
<213> Homo sapiens
<220>
<221> misc feature
<222> (338)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (343)
<223> n equals a,t,g, or c
<400> 115
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gagtgcagtg gtggctgccg ccgcaccagc ctcagtggca gatgacacac caccccccga 180
gegteggaac aagageggta teateagtga geceeteaac aagageetge geegeteeeg 240
cccgctctcc cactactctt cttttggcag cagtggtggt agtggcggtg gcagcatgat 300
gggcggagag tetgetgaca aggccaetge ggetgeance tgneeteect gttggecaat 360
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aagaagegga aaegetgegg catgtgegeg ceetgeegge ggegeateaa etgegageag 840
tgcagcagtt gtaggaatcg aaagactggc catcagattt gcaaattcag aaaatgtgag 900
gaactcaaaa agaagcette egetgetetg gagaaggtga tgetteegae gggageegee 960
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gttgatggcg ccgtgtagaa gccgctctgt atccatccac gcgtgcagag ctgccagcag 1560
ggageteaca gaaggggagg gageaceagg ceagetgage tgcacceaca gtecegagae 1620
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<210> 116
<211> 1060
<212> DNA
<213> Homo sapiens
<220>
<221> misc feature
<222> (299)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (1060)
<223> n equals a,t,g, or c
<400> 116
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gggatacaag cttccaaagg yccggaaaac tggcacgacc atcgctgggg tggtctataa 180
ggatggcata gttcttggag cagatacaag agcaactgaa gggatggttg ttgctgacaa 240
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cctctacage atetatcete atggateaac tgataagttg cettatgtea ccatgggtte 540
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eggaagcaac attgacetet gegteateag caagaacaag etggatttte teegeecata 720
cacagtgccc aacaagaagg ggaccaggct tggccggtac aggtgtgaga aagggactac 780
tgcagtcctc actgagaaaa tcactcctct ggagattgag gtgctggaag aaacagtcca 840
aacaatggac acttcctgaa tggcatcagt gggtggctgg ccgcggttct ggaaggtggt 900
aaaaaaaaa aaaaaaaaaa aaaaaaaaaa
                                                             1060
<210> 117
<211> 709
<212> DNA
<213> Homo sapiens
<220>
<221> misc feature
<222> (174)
<223> n equals a,t,g, or c
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<400> 117
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gacttgtctg atcacccaat ggaagtggat acttgtaaag tctacaccac tgtacttggc 120
gttaaatctt gctgaattcg tggtaagctg ttaccatgtc tacattttgt agantgattt 180
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PCT/US00/05882 WO 00/55350

96

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101

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PCT/US00/05882

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106

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107

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tatgggcaat catcaccaaa ctgtgcacca gaatgtaact gccctgaaag ctacccaagt 240
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<223> n equals a,t,g, or c
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<223> n equals a,t,g, or c
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<223> n equals a,t,g, or c
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123

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130

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133

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135

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PCT/US00/05882

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PCT/US00/05882

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167

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169

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178

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180

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186

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187

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<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (853)
<223> n equals a,t,g, or c
<400> 231
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geogaggeet gggttacaag cagcaagtge geggttgggg ceaetgegag geegttttag 180
aaaactgttt aaaacaaaga gcaattgatg gataaatcag gaatagattc tcttgaccat 240
gtgacatctg atgctgtgga acttgcaaat cgaagtgata actcttctga tagcagctta 300
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ccaataccat tgactataaa agctattttt gaaagattca agaacaggaa aaagagatat 480
aaaaaaaaga aaaagaggag gtaccagcca acaggaagac cacggggaag accagaagga 540
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tttgagcaag ctgttgcaag aggatttttt aactatattg aaaaactgaa gtatgaacac 720
cacctgaaag aatcattgaa gcaaatgaat gttggtgaag atttagaaaa tgaagatttt 780
gacagtogta gatacaaatt tttggatgat gatggatcca tttctcctat tgaggagtca 840
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tatgacaatt gggattatta cagttgagcc aagc
<210> 232
<211> 486
<212> DNA
<213> Homo sapiens
<220>
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<221> misc feature
<222> (49)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (440)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (485)
<223> n equals a,t,g, or c
<400> 232
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                                                                 486
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<211> 2081
<212> DNA
<213> Homo sapiens
<400> 233
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gactcaccat gacaactggc aggaacataa acagcaattc actgatgacc aactgcttgt 540
tctcaccgat cttcttgtgt caccatgcta ttatgcatag aaagatgact agtcctcact 600
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agtgaagtet gtgtetgtge actteceaea gaetggagtt tttggtgetg aatagageea 1200
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ctttacaact attttttgac cctctgaaaa ttattatact tcacctaaat ggaagactgc 1380
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<210> 234
<211> 516
<212> DNA
<213> Homo sapiens
<220>
<221> misc feature
<222> (490)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (498)
<223> n equals a,t,g, or c
<400> 234
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tccattatgt ggttcatgaa ctggttccta cagcagatca atgtcctgca gaaggaacta 480
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<210> 235
<211> 1129
<212> DNA
<213> Homo sapiens
<220>
<221> misc feature
<222> (807)
<223> n equals a,t,g, or c
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<400> 235
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gagaggaggg gcaggaccag atcttttgag agctgagggt tgagggcatt gagccaacac 180
acagatttgt cgcctctgtc cccgaagaca cctgcaccct ccatgcggas caagatgggg 240
aatggaactg aggaagatta taactttgtc ttcaaggtgg tgctgatcgg cgaatcaggt 300
gtggggaaga ccaatctact ctcccgattc acgcgcaatg agttcagcca cgacagccgc 360
accaccateg gggttgagtt etecaccege actgtgatgt tgggcaccge tgctgtcaag 420
gctcagatct gggacacagc tggcctggag cggtaccgag ccatcacctc ggcgtactat 480
cgtggtgcag tgggggccct cctggtgttt gacctaacca agcaccagac ctatgctgtg 540
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gagetageet ttgagaetgt cetgaaagaa atetttgega aggtgteeaa geagagaeag 780
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<210> 236
<211> 1045
<212> DNA
<213> Homo sapiens
<220>
<221> misc feature
<222> (973)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (1001)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (1014)
<223> n equals a,t,g, or c
<400> 236
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cagoctoccg ggcagocaco accacogoag otgtottoco accgtggaga cotoatcacg 480
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<210> 237
<211> 690
<212> DNA
<213> Homo sapiens
<220>
<221> misc feature
<222> (666)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (678)
<223> n equals a,t,g, or c
<400> 237
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<210> 238
<211> 1873
<212> DNA
<213> Homo sapiens
<220>
<221> misc feature
<222> (568)
<223> n equals a,t,g, or c
<400> 238
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<210> 239
<211> 905
<212> DNA
<213> Homo sapiens
<220>
<221> misc feature
<222> (873)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (874)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (897)
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<223> n equals a,t,g, or c
 <220>
 <221> misc feature
 <222> (898)
 <223> n equals a,t,g, or c
 <400> 239
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<213> Homo sapiens
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<222> (1457)
<223> n equals a,t,g, or c
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<221> misc feature
<222> (1471)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (1480)
<223> n equals a,t,g, or c
<400> 240
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<211> 1521
<212> DNA
<213> Homo sapiens
<400> 241
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ggtttgtgtg tttctgtttt gtttctctcc ccctgcaggg ctgtttkcgg ggtggggtgg 180
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206

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<212> DNA

<213> Homo sapiens

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212

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222

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<223> n equals a,t,g, or c
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<221> misc feature
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<223> n equals a,t,g, or c
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gggtgtcaag ccccattccc tctctactct tgacagcagg attggatgtt gtgtattqtq 1260
gtttatttta ttttcttcat tttgttctga aattaaagta tgcaaaataa agaatatgcc 1320
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PCT/US00/05882 WO 00/55350 233

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242

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244

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1666

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PCT/US00/05882

271

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272

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283

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<223> n equals a,t,g, or c

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300

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